

REMARKS

Claims 1-34 are pending and claims 1-20 and 26-34 are under consideration. Claims 1 and 26 have been amended. No new matter is presented.

Claims 7-8 were objected to because of minor informalities. The Examiner suggested amending the claims to correct this informality. However, Applicant respectfully submits that the claims, as they are worded, are consistent with the invention. The edge area is an edge which divides the image from a general background when the image is being read. Therefore, there is actually an area which is considered to be inside the image and an area which is considered to be outside the image. The edge area defines this boundary. For example, if you were to photocopy a single sheet of paper by placing the paper on the glass of the copier, the edge of the paper would be an edge between the inside of the image, which is the paper being copied, and the outside of the image, which is perhaps the copier cover over the glass which is around the area where the paper is placed. Thus, claims 7 and 8 are consistent with the claimed invention. Applicant requests that this objection be withdrawn.

Claims 1, 2, 7-10, 26, 27 and 31-34 were rejected under 35 USC 102(b) as being anticipated by Katayama (U.S. Patent No. 5,361,147). This rejection is respectfully traversed.

The invention is directed to a technique for suppressing color drift generated in black letters or lines in images to enhance the reproduction quality when reproducing color images. For that purpose, claim 1 recites “an edge enlarging portion for enlarging the edge area detected by the edge detecting portion” and “a density correcting portion for increasing or decreasing the density of the image data of the edge area enlarged by the edge enlarging portion, wherein the image data includes a black component and color components, and the **density correcting**

portion increases at least a density of the black component.” After the edge area is enlarged, the density of the image data of the enlarged edge area is either increased or decreased. Accordingly, color drift can be reduced even when the image reader is a high-definition image reader.

Katayama discloses a technique for encoding color images without deteriorating image quality. More specifically, Katayama discloses a technique for detecting a black character area and a color image area, other than the black character area, to encode the black character area with an encoding method different from that used for the remaining area. Referring to Fig. 11A, showing the second embodiment, the black character area is encoded by arithmetic encoding (218), while the area other than the black character area is encoded by orthogonal conversion encoding (223). Then, the encoded data is transmitted.

Claim 19 of Katayama, which is referred to by the Examiner, corresponds to the embodiment shown in Figs. 11-20. According to Figs. 14A-14C and description thereof, a 3×3 pixel filter is used to enlarge the black character area and pixels in the enlarged black character area are substituted for an average value of other pixels in a block. This substitution operation is a process performed in step 221 of Fig. 11A. Stated differently, step 221 of Fig. 11A eliminates the black character area from the color image in order to encode the color image area other than the black character area.

As discussed above, Katayama discloses a technique for substituting an enlarged edge portion for an average value surrounding the enlarged edge portion in order to eliminate the black character area from the color image. Accordingly, Katayama fails to disclose or suggest

the claimed density correcting portion for increasing at least a density of a black component in the enlarged edge area.

Claims 2 and 7-10 are allowable at least due to their dependency from claim 1. Claim 26 is a method claim which corresponds to claim 1. Accordingly, claim 26 is allowable for the same reasons claim 1 is allowable. Claims 27 and 32-34 are allowable at least due to their respective dependencies. Applicant respectfully requests that this rejection be withdrawn.

Claims 11, 12 and 17-20 were rejected under 35 USC 103(a) as being unpatentable over Katayama in view of Suzuki (U.S. Patent No. 5,742,410). This rejection is respectfully traversed.

Claim 11 recites a modifying portion for modifying the edge area enlarged by the edge enlarging portion in accordance with the lightness information thereof. The Examiner admits that Katayama does not disclose this feature. The Examiner asserts that Suzuki teaches an edge quantity detection circuit to detect the edge area according to the lightness values. However, merely detecting the edge area is not the same as modifying the edge area enlarged by the edge enlarging portion. Therefore, the features of claim 11 are not taught or suggested by Katayama, Suzuki, or a combination thereof.

Claims 12 and 17-20 are allowable at least due to their respective dependencies. Applicant respectfully requests that this rejection be withdrawn.

Claims 4-6, 14-16 and 28-30 were rejected under 35 USC 103(a) as being unpatentable over Katayama in view of Tamura (U.S. Patent No. 5,430,557). This rejection is respectfully traversed.

Claims 4-6, 14-16 and 28-30 are all dependent claims. Since Katayama fails to teach that which the Examiner asserts, and Tamura also fails to teach or suggest the features of the independent claims of this application and is not being relied upon as teaching these features, the features of these claims are also not taught or suggested by Katayama, Tamura, or a combination thereof. Applicant respectfully requests that this rejection be withdrawn.

Claims 3, 13 and 27 were rejected under 35 USC 103(a) as being unpatentable over Katayama in view of Hirata (U.S. Patent No. 5,357,353). This rejection is respectfully traversed.


Claims 3, 13 and 27 are all dependent claims. Since Katayama fails to teach that which the Examiner asserts, and Hirata also fails to teach or suggest the features of the independent claims of this application and is not being relied upon as teaching these features, the features of these claims are also not taught or suggested by Katayama, Hirata, or a combination thereof. Applicant respectfully requests that this rejection be withdrawn.

In the event that the transmittal letter is separated from this document and the Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge

the cost of such petitions and/or other fees due in connection with the filing of this document to
Deposit Account No. 03-1952 referencing docket no. 325772014200.

Respectfully submitted,

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